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ABSTRACT

This newsletter theme issue contains several articles on postsecondary education for individuals with disabilities. "Supported Education for People with Psychiatric Disabilities...Issues and Implications" (Karen V. Unger) describes three prototypes for postsecondary education of individuals with psychiatric disabilities--the self-contained classroom, on-site support, and mobile support. "Postsecondary Education for Students Who Are Deaf...A Summary of a National Study" (John G. Schroedel and Douglas Watson) describes four study components: the postsecondary programs themselves, the students attending, the alumni, and state vocational rehabilitation agency policies and practices. "Developing a Sense of Community for Students with Disabilities at a Tribally Controlled College" (Mike Hermanson and Barbara Landstrom) reviews a model implemented at Salish Kootenai College in northwestern Montana. "Project Employment...A Model for Change" (Charles C. Wall and Holly Culhane) discusses a project of Bakersfield College in California designed to bridge the gap between education and the world of work for individuals with disabilities. "HEATH Resource Center...National Clearinghouse on Postsecondary Education for Individuals with Disabilities" (Rhona C. Hartman) describes activities of the resource center and typical questions that it answers. "Assisting Young Adults with Severe TBI To Get and Keep Employment through a Supported Work Approach" (John Kregel and others) discusses intervention with individuals with traumatic brain injury. (JDD)

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A Message From the Assistant Secretary

Robert R. Davila

AMERICA 2000

On April 18, 1991, President George Bush and Education Secretary Lamar Alexander announced the creation of an innovative, far-reaching plan to revitalize the nation's schools, workplaces, and communities. AMERICA 2000 calls for a revolution in American education. In this column, I would like to share my vision of AMERICA 2000 and the roles of rehabilitation and special education in its implementation.

AMERICA 2000 is a four-part strategy for achieving the national educational goals adopted by the President and the nation's governors in 1990.

- For today's students, AMERICA 2000 calls for **better and more accountable schools**. A 15-point accountability package will encourage parents, teachers, administrators, and communities to reward educational excellence and to demand change when schools fall short.

- For tomorrow's students, AMERICA 2000 envisions **a new generation of schools**. Congress has been requested to provide seed money for at least 535 New American Schools that will "break the mold" of existing school programs and train students for the next century.

- AMERICA 2000 also invites all adults to be lifetime learners and to make the U.S. **a nation of students** rather than a nation at risk.

- AMERICA 2000 calls on each community to become a **community where learning can happen**. For education reform to succeed, it is imperative to look beyond the classroom to communities and families.

AMERICA 2000 is for all Americans, including individuals with disabilities. Moreover, we in the disability community can play a leadership role in developing the new schools and adult learning centers envisioned by the President and the Education Secretary in AMERICA 2000. Our rehabilitation and special education programs are models for the reform of regular education. We have both the opportunity and the obligation to participate in what President Bush has called a renaissance in education.

The Infants and Toddlers program, with its emphasis on family involvement and coordinated support services, is an example of the type of program that will help to ensure that we achieve the first national education goal -- that all children start school ready to learn. For adults, our vocational rehabilitation evaluation and training programs are models for the skills assessment and training clinics envisioned in AMERICA 2000. Through our programs for people with disabilities, OSERS will take a leadership role in shaping what AMERICA 2000 will mean for all Americans.

I have been working closely with Secretary Alexander to define OSERS' role in implementing AMERICA 2000 and have been assisting him in ensuring that people with disabilities are included in all aspects of the reform movement. We in OSERS are working to identify activities that support the four-part AMERICA 2000 strategy and to develop innovative ways in which individuals with disabilities can participate. I invite all members of the disability community to contribute to our efforts and to share ideas with us. These are exciting times for each of OSERS' constituencies, and I look forward to working with you as we pursue our shared commitment to individuals with disabilities.

NATIONAL GOALS FOR EDUCATION

1. By the year 2000, all children in America will start school ready to learn.

2. By the year 2000, the high school graduation rate will increase to at least 90 percent.

3. By the year 2000, American students will leave grades four, eight, and twelve having demonstrated competency in such challenging subject matter as English, mathematics, science, history, and geography; and every school in America will ensure that all students are prepared for responsible citizenship, further learning, and productive employment in our modern economy.

4. By the year 2000, American students will be first in the world in science and mathematics achievement.

5. By the year 2000, every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy.

6. By the year 2000, every school in America will be free of drugs and violence and will offer a disciplined environment conducive to learning.

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John Kregel, Ed.D., Michael West, M.Ed. and Paul Wehman, Ph.D.

Supported Education
for People with Psychiatric Disabilities

Issues and Implications

Karen V. Unger, M.S.W., Ed.D.
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The challenge for rehabilitation professionals is to reconceptualize their roles as they begin to assist people with disabilities in fulfilling their dreams. In relation to providing supported education services, several critical questions come to mind. Can a young adult with a history of mental illness begin or return to college or to a technical training institute? Can he/she complete a course of study and go on to a professional or skilled occupation? For some young adults with a history of mental illness, as with young adults regardless of their health histories, occupations in the service industries are appropriate and satisfying. However, as with all young people, a range of possibilities should be open, and career decisions, tempered by determination and capabilities, should be left to the young adults themselves.

For many young adults with a history of mental illness, attending or returning to college has been a lost dream. In a study done in 1984 (Unger & Anthony), National Alliance for the Mentally Ill (NAMI) members reported that 91 percent of their family members had completed high school and 58 percent had completed some college. These percentages speak to the number of young adults who had initially chosen higher education as a means of career development. However, without the support necessary to sustain them, most who chose to return to college after the onset of their illness dropped out.

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". . . Most disabled people share the same fundamental needs and aspirations: The need to meet the challenge of the disability and to reestablish a new and valued sense of integrity and purpose within and beyond the limits of the disability; the aspiration to live, work and love in a community in which one can make a significant contribution."

. . . Pat Deegan,
in her article:
Recovery, The Lived Experience of Rehabilitation.

To address the aspirations of the young adults like those in the NAMI study, the Center for Psychiatric Rehabilitation at Boston University established a Continuing Education Program (CEP) in 1983 (Unger, et al., 1987, Hutchinson, Kohn, & Unger, 1989). Funded by the National Institute on Disability and Rehabilitation Research (NIDRR), the Office of Special Education and Rehabilitative Services (OSERS) of the U.S. Department of Education, and the National Institute of Mental Health (NIMH), the purpose of the CEP was to help young adults with a history of mental illness return to college. Of the fifty-three students who enrolled in the program, 60 percent completed all four semesters. Prior to their participation in the CEP, 19 percent of the students were competitively employed or enrolled in an education program; after the intervention, 42 percent of the students achieved that status (Unger, et. al., 1991). The ideas generated by this program spawned other programs nationwide and from this fledgling movement came the idea of supported education. Modeled after the definition of supported employment in the Rehabilitation Act Amendments of 1986 and very similar in concept, supported education is defined as: Education in integrated settings for people with severe psychiatric disabilities for whom postsecondary education has not traditionally occurred or for people for whom postsecondary education has been interrupted or intermittent as a result of a severe psychiatric disability and who, because of their disability, need ongoing support services to be successful in the education environment.

A number of programs that meet the definition of supported education have emerged in various forms over the past several years. They represent different approaches to providing services to this population in a postsecondary environment. In examining the characteristics of existing programs, they seem to divide themselves into three distinct program models or prototypes.

These three prototypes can be categorized on the basis of two variables. These variables are the level of integration and where the support is provided. The three prototypes are self-contained or closed classrooms, on-site support, and mobile support.

Self-contained classroom: Students attend classes on a postsecondary site with other students who have psychiatric disabilities. The curriculum is set, and students receive the same instruction in the same classroom. The students are not initially integrated into regular classes, but they may participate in activities and use the resources of the institution. Support is available from program staff for students as they progress and move on to regular classes. Program staff may be from the sponsoring program and/or from the academic institution.

On-site support: Students attend regular classes at the postsecondary site where they are matriculated and receive credit. Support is provided by staff from the postsecondary site. Services are most often provided through the disabled student services or mental health/counseling services.

Mobile support: This model is the same as the on-site support model with the exception that the support is provided by staff from community-based mental health services or rehabilitation programs.

The Self-Contained or Closed Classroom Prototype

Each prototype of supported education has pros and cons for its implementation. The self-contained or closed classroom prototype has the advantage of being on a college cam-

pus and providing instruction directly related to the needs of the students with psychiatric disabilities. The Career Development Programs located at Boston University and at Buffalo State University teach career development skills over three semesters. The curriculum provides a means for the student to develop career goals and begin implementing a career plan. Because of the supportive nature of the class and its relevant content, it provides an environment where students can explore who they are and formulate a new identity, separate from that of mental health patient. It gives the student a forum to work on developmental tasks that may have been arrested with the onset of the illness; and it provides a social context for students to relate to their peers and to develop relationships with professionals who are their instructors and not mental health providers.

The self-contained or closed classroom seems most appropriate for the young adult who has not experienced much success since the onset of his/her illness. Because it provides a structured schedule, and has a work goal as its final objective, the program provides a good first step for those who are not ready to begin a college or work experience on their own.

One disadvantage of this model is that it is not fully integrated into the college environment. Again, young adults are in a "special" program although it has the advantage of being in an age appropriate, non-stigmatizing environment. A second disadvantage is that the program is labor intensive and costly. It requires trained staff, a specialized curriculum, and program aids to provide the necessary support.

An intermediate step between the self-contained or closed classroom and the next prototype, on-site support, is to provide a campus orientation class for all students who may have fears and reservations about returning to campus. Offered as a credit course, and open to students with any disability, less mature students, or older students, it provides a vehicle to teach study and scheduling skills, test taking skills, and problem solving skills. It also provides a safe place where students can discuss personal adjustment issues with others who may have similar experiences. It identifies a helpful, supportive instructor, and helps students become familiar with the campus and college life.

On-Site Prototype

The second prototype, on-site support, utilizes staff from the disabled student services office, or its equivalent, to provide support to the student with psychiatric disabilities. Having students with disabilities on campus has become the norm. Most campuses have designated staff to work with these students to help them meet the additional challenges their disabilities may present. Over time, more students with psychiatric disabilities are identifying themselves and utilizing the resources of the disabled student services office. These students have offered new challenges to staff as the staff try to meet the needs of this new population on campus.

The concept of reasonable accommodations, the removal of barriers to participation, has become an important issue with regard to the availability of resources to students with psychiatric disabilities. From an institution's point of view, guidelines for what is appropriate relate to whether the accommodation places an unreasonable economic hardship on the institution and whether it results in a major curriculum or environmental modification. Serving students with psychiatric histories on campus is a relatively new phenomenon. There have been few court cases to set precedents for what reasonable accommodations for persons with a psychiatric disability might include. However, based on existing knowledge and experiences, the following accommodations have been provided:

- assistance with registration/financial aid
- extended time for exams
- change of location for exams
- parking

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- note taking, tape recorders
- seating arrangement modifications
- beverages allowed in class
- peer support
- identified place to meet on campus that is non-threatening before or after class
- incompletes rather than failures if relapse occurs
- time management
- study skills
- special topic courses (college survival, personal psychology)

Most of these accommodations are the same as those provided by disabled student services for other disability groups. However, in addition, students with psychiatric disabilities may need additional emotional support. Often, the counselor becomes a key support person for the student while he/she is on campus.

The primary advantage of the on-site prototype is that it provides for full integration onto the campus. With the additional support of staff from the disabled student services office, or its equivalent, many students are able to complete their course work, participate in campus life, and manage their illness successfully.

The disadvantage to the on-site support prototype is that many students do not want to identify themselves in order to receive services.

Mobile Support Prototype

The third prototype of supported education, mobile support, challenges existing beliefs about treatment and the services available to patients through mental health and rehabilitation agencies. Providing supported education services means reconceptualizing how and what services are delivered from these agencies. Staff members need to rethink their roles and the roles they believe are available to their clients. As case managers and providers of day treatment and rehabilitation services, they need to see their services as enabling clients to take on the role of student as an integral part of the rehabilitation program and as a means for more complete community integration. This attitudinal shift is the first step in a process. It should be reflected in the mission and values of the agency and permeate all work and expected outcomes.

The second step in the process is for the staff to assist clients with decision making and goal setting to determine if returning to school is appropriate for them. A third step is to help prospective students choose an appropriate postsecondary institution and course work, matching their needs with the institution's resources.

Some agencies, most notably, Thresholds Inc., of Chicago, have incorporated these two steps with a third, providing classroom instruction as a preparatory step in returning to the college environment. The classes incorporate remedial English, math, reading, computer skills, and campus survival skills.

The actual mobile support happens as students begin attending college. The mental health staff may help the student link with disabled student services, financial aid, and housing as well as providing for crisis management. The primary task is to provide new students with emotional support as they begin to feel comfortable in their role as student.

The advantage of the mobile support prototype is that it does not require additional resources. It means utilizing in new ways such existing resources as case managers, day treatment, or rehabilitation staff. It may also mean refocusing existing programs and program resources to help clients set meaningful goals, provide them with individualized support, and assist them to learn new skills. The disadvantage of the mobile support prototype is that staff may have to become acquainted with and travel to different institutions to provide on-site support to the student. They may have to gain new knowledge about financial aid or campus policies. The most notable change is the change in role to a more egalitarian one of advocate and enabler rather than as treatment provider.

Supported Education Issues

Concerns of postsecondary sites often relate to misconceptions and misunderstandings about the nature of

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mental illness and people with psychiatric disabilities. Some institutions are concerned that if they open the doors to this disability group, their campus will become a dumping ground for inadequately-funded community programs.

A second concern is that students with psychiatric disabilities become identified as the disruptive students on campus. Campus staff, often in their efforts to be accommodating to students with a history of mental illness, are sometimes reluctant to apply the same standards of behavior to these students because of the students' perceived vulnerability. In more extreme cases, postsecondary sites may use a psychiatric withdrawal if a student with a history of mental illness comes repeatedly to their attention. Others may make participation in mental health services a requisite for attending the college.

Concerns of mental health agencies relate to making appropriate referrals and to providing appropriate support for students attending postsecondary sites. Another role for mental health and rehabilitation agencies is to initiate and develop linkages with the educational sites.

A concern of students is the fear of being identified to campus personnel as someone having a history of mental illness. The question of confidentiality often arises. It is necessary to determine what level of information is necessary in order for the institution to provide reasonable accommodations to their students with disabilities.

Future Trends

The Center for Psychiatric Rehabilitation is currently funded by the National Institute on Disability and Rehabilitation Research (NIDRR) and the National Institute of Mental Health (NIMH) to develop four new supported education sites. The primary focus is to develop supported education sites utilizing existing community resources. To date, two sites have been selected and two are pending. One project site, the Mental Health and Mental Retardation Authority of Harris County, Houston, Texas, is developing a mobile support model in collaboration with Houston Community College. Additional support is being provided by the Texas Rehabilitation Commission and the Harris County Private Industry Council.

A second site, the Luna Vocational Technical School in Las Vegas, New Mexico, is developing an on-site supported education model in collaboration with San Miguel/Mora Mental Health Services, the Division of Vocational Rehabilitation, Las Vegas Medical Center, and the Consumers Council of New Mexico. At both sites, staff of all participating organizations will be provided with education and skills training, and program development consultation, as appropriate. Ongoing evaluation will be an integral part of each program. At both sites, the community resources will be used to strengthen the supported education program.

Nationwide, there is a growing awareness that postsecondary education is an important step toward community reintegration for many people with psychiatric disabilities. Colleges, universities, and technical training institutes are beginning to acknowledge the growing number of these students on campus and are expanding student services to meet their needs.

As more students with psychiatric disabilities attend postsecondary sites, misconceptions and misunderstandings about mental illness can be dissolved. Staff and students alike will have the opportunity to see the person with this disability as more than the disability, and that psychiatric disabilities, as other disabilities, can be managed. Supported education is an opportunity for young adults with psychiatric disabilities to reestablish a new identity and to assume new roles.

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POSTSECONDARY EDUCATION FOR STUDENTS WHO ARE DEAF

A SUMMARY OF A NATIONAL STUDY

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Educational attainment is the single most important determinant for improving individual socioeconomic status among people who are deaf or hearing impaired. For this reason, local, state, and federal governments expend more than $100 million each year to fund special postsecondary education programs for people who are deaf. Obviously meeting a national need, this area expanded from only one program, Gallaudet College with 493 students in 1961, to 150 programs with over 7,000 students in 1988 (Gallaudet College, 1962; Rawlings, Karchmer, & DeCaro, 1988). This expansion was characterized by at least one major national crisis in each of the last three decades.

Inadequate vocational training opportunities for high school leavers who are deaf was the crucial challenge facing postsecondary education and rehabilitation professionals in the 1960s. Both a national conference (Ott, 1965) and a national advisory committee (USDHEW, 1965) recommended that national and regional technical-vocational institutes for students who are deaf be established at two-year and four-year colleges. The federal response to these recommendations was immediate and effective. The National Technical Institute for the Deaf (NTID) at the Rochester Institute of Technology was initiated in 1965 with regional technical-vocational institutes in Seattle and St. Paul and undergraduate and graduate training programs at California State University at Northridge (CSUN) were started in the late 1960s.

Assuring equal access by students who are deaf to postsecondary education was the major issue facing these programs in the 1970s. The Vocational Education Act of 1968 stimulated numerous two-year and four-year colleges to develop specialized programs for students who are deaf. Even more influential was the Rehabilitation Act of 1973. Implementing Section 504 led to the establishment of services for students who are deaf within campus programs serving students with various disabilities. The central crisis during the 1980s was the large inflow of students with deafness and hearing impairments born during the rubella epidemic of 1964 and 1965. Enrollments of students with deafness at 145 postsecondary programs increased by twenty-one percent during 1982 and 1985 (DeCaro, Karchmer, & Rawlings, 1987).

The explosive growth in the number of special postsecondary programs for students with deafness is charted in Figure 1, which also illustrates the number of new programs that were initiated during each of

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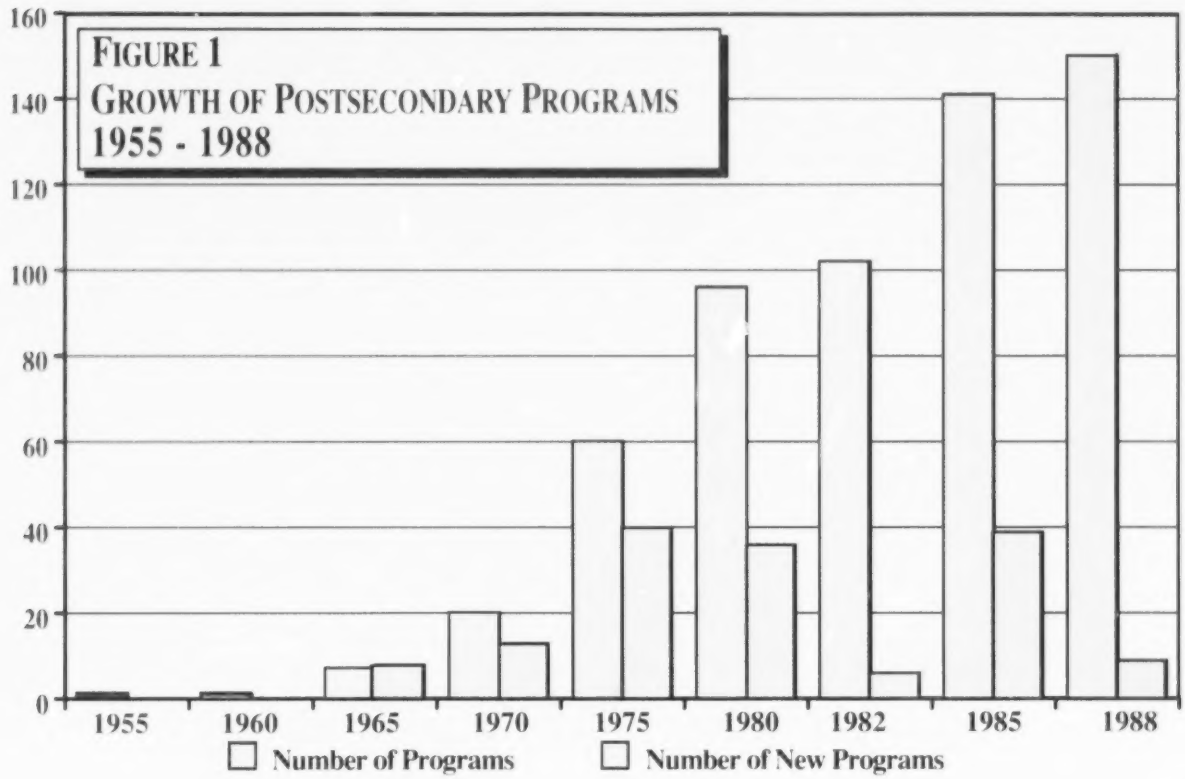

the intervals between 1955 and 1988. Two peaks are evident in this trend line: the first represents seventy-six new programs started between 1970 and 1980, apparently stimulated by the 504 regulations, and the second indicates thirty-nine additional programs established between 1982 and 1985 to meet the "rubella bubble" swelling enrollments at the time.

Overall Purposes of the Study

The National Institute on Disability and Rehabilitation Research (NIDRR), in September 1983, awarded a grant to the Rehabilitation Research and Training Center on Deafness and Hearing Impairment at the University of Arkansas for the purpose of gathering important data on the postsecondary education of students with deafness. At the time the study began there were several questions concerning the conditions of postsecondary education for students in the United States who are deaf. These questions can be organized into four categories which serve to convey the broad purposes of the study.

1. **The programs themselves:** What kinds are there and where are they located? How many staff members are employed in what kind of positions at these programs? What are the support services provided by these programs and how are services organized and administered?

2. **The students attending these programs:** How many students are there and which programs are they attending? Are they enrolled in programs within the states where they graduated from high school or are they going out of state for their postsecondary education? What are the characteristics of these students? How do students feel about their experiences on campus? Which support services are they using and how do they rate these services? What majors or areas of training do these students study and what degrees do they expect to obtain? What are their plans after graduation?

3. **The alumni of these programs:** What are their educational attainments? How many of them are working, what kinds of jobs do they have, what are their earnings, and are they satisfied with their jobs?

4. **State vocational rehabilitation agency policies and practices on sponsoring students who are deaf in postsecondary training programs:** How many students do these agencies support in postsecondary training? What factors do VR counselors consider when helping clients who are deaf select their postsecondary programs? How do the agencies appraise the students' financial sta-

tus in determining eligibility for rehabilitation assistance? In what ways do the state VR agencies coordinate information on the educational funding students receive from various sources? What are the patterns in communication between the VR agencies and postsecondary programs?

Methods

The methods of collecting data for the four projects are briefly described to guide interpretation of the findings.

Project 1: A National Study of Postsecondary Programs

The postsecondary programs in this study were selected from among the 102 listed in ***College & Career Programs for Deaf Students*** (Rawlings, Karchmer, & DeCaro, 1983) because they met the following criteria: (1) the program was located in an accredited institution, (2) a minimum of fifteen students were enrolled, and (3) the program complied with the principles advocated by the Conference of Educational Administrators Serving the Deaf (Stuckless, 1973). In general, programs meeting these criteria had larger enrollments of students who are deaf. The sixty-one eligible programs were contacted and fifty-one (85 percent) agreed to participate. During 1984, 90 percent or forty-six of the fifty-one program coordinators completed a mailed survey form. These included three rehabilitation facilities, seven technical institutes, twenty-four community colleges, and twelve four-year colleges.

Project 2: Prospective Program Graduates

The population for this study was students with deafness who were expected to graduate with the classes of either 1984 or 1985 with a vocational, associates, bachelors, masters, or doctoral degree, with nondegree aspirants excluded. Project staff visited forty-one of the cooperating programs during the spring of 1984 and again in the autumn of 1984 to collect data. Questionnaires were typically administered to small groups of students. Completed questionnaires were received from 44 percent or 743 of the 1,703 expected graduates in both classes.

Project 3: Program Alumni Follow-up Survey

In the spring of 1984, project staff contacted the 371 graduates in the class of 1984 to request their cooperation with this survey. A total of seventy-five alumni either declined to participate or could not be traced, leaving 296 alumni eligible for the survey. Project staff successfully located 86 percent and between August 1985 and February 1986 received completed mailed questionnaires from 193 or 65 percent of the 296 alumni.

Project 4: National Study of Rehabilitation Policies and Practices in Postsecondary Education

The participants in this survey were the coordinators of VR services for people who are deaf (SCD) in each vocational rehabilitation agency from the 50 states and three territories. Mailings of a survey questionnaire between November 1984 and January 1985 resulted in a 100 percent response rate.

Summary of Significant Research Findings

Major findings from these four interrelated research projects are presented below. Key results are organized around major themes including: the programs, campus support services, the students, the alumni, and vocational rehabilitation.

Characteristics of the Postsecondary Programs

Most programs are small. Although the size of the programs in this study varied widely, a "typical" program was directed by a coordinator with five full-time staff members and twenty-nine part-time staff serving forty-two full-time and part-time students. Many of the smaller programs in this study were organized within campus units serving students with other disabilities. Service programs exclusively for students with deafness were less common.

Campus environments differ at each type of program. There were clear differences between the rehabilitation-technical programs, community colleges, and four-year colleges in terms of admissions criteria, quality of academic work required, and levels of degrees awarded. These different policies and practices shaped the composition of the student bodies and created distinctly different environments at each type of program.

Campus Support Services for Students

Factors influencing use of academic support services. Communication patterns in the classroom determined the availability and student use of academic support services. Almost half of the 3,300 support staff serving 5,000 students with deafness at the forty-six programs were notetakers or interpreters involved in facilitating academic integration of the students. Classroom communication varied by type of program attended: a majority of students at the rehabilitation facilities and federally funded four-year colleges communicated directly to their teachers through sign language, whereas most students at the technical institutes, community colleges, and nonfederally funded four-year colleges used interpreters in the classroom. Most deaf students at the rehabilitation facilities, community colleges, and federal four-year colleges had access to a

counselor who communicated through sign language, but only a minority of students at the technical institutes and nonfederal four-year colleges had available a counselor who could sign.

Student use and ratings of campus services. A majority of students expressed positive attitudes toward campus personnel and support services. A major factor in the variation of using services at the four types of programs was derived from differences in the students themselves. Students at the rehabilitation facilities used support services as well as career development and job placement services more frequently in part because they demonstrated a greater need for these services. The lower rate of using job placement services by students with deafness at the community colleges was associated with their intention of seeking additional education rather than employment upon graduation.

Retention support services. Program coordinators reported that almost 20 percent of their students who are deaf had withdrawn during the previous school year. To identify and assist those students at risk for withdrawal, most programs use traditional practices such as counseling. Less than half of the programs provided tutoring or remedial assistance to potential dropouts. Even fewer programs offered special early alert systems to identify such students for special services and only 20 percent interviewed withdrawing students.

Student Characteristics, Attainments, and Aspirations

Factors influencing student selections of their programs. Most students chose their programs for the type of education or training provided. A large majority of students at the community colleges and four-year colleges attended these programs because they wanted to get a good education. In contrast, most students at the technical institutes chose their programs for the vocational training options offered. Students at the rehabilitation facilities cited diverse reasons such as getting a good education, job training, making friends, or wanting to become independent.

Racial inequality at postsecondary programs. Minority youth who are deaf not only were much less likely to obtain postsecondary training than were their white peers, they also were much more likely to acquire vocational training rather than an academic education. According to program coordinators, less than 15 percent of the 5,000 students at the forty-six programs were black or Hispanic in 1983. On the other hand, 32 percent of the nation's school-aged hearing-impaired population were found to be black or Hispanic (Karchmer, 1985). In addition, black and Hispanic students were in proportion three times more likely to be found at rehabilitation-technical programs than at two-year and four-year colleges. In contrast, there was an almost even distribution of white students at these programs. Sixty-one percent of blacks and Hispanics, in contrast to 46 percent of whites, envisioned completing a vocational degree, largely reflecting differences in the types of programs these students attended.

Graduates who are deaf do not achieve educational parity. Three-fourths of the graduates in the classes of 1984 and 1985 expected to complete a vocational or associate's degree compared to 24 percent in the postsecondary educated general population (Grant & Snyder, 1983). Toward closing this gap in educational attain-

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FIGURE 2
MEAN 1985 EARNINGS BY LEVEL OF HIGHEST COMPLETED DEGREE

Highest Completed Degree	Mean
All Degrees	*$14,000*
Vocational Degree	*$11,500*
Associate Degree	*$11,800*
Bachelor Degree	*$16,000*
Masters Degree	*$20,500*

ment, one key step would be to encourage more eligible people with deafness to complete advanced degrees.

PROGRAM ALUMNI IN THE WORLD OF WORK

Most alumni were employed in white-collar jobs. A majority of the alumni in the class of 1984 from both federal and nonfederal programs obtained employment in a variety of occupations commensurate with their training. Thirty-seven percent of alumni were employed in professional, technical, and managerial jobs, 30 percent worked in clerical occupations, and one-third were in crafts, machine operative, or service jobs.

Alumni have high rate of labor force participation. Almost all alumni were engaged in productive roles when contacted during the survey. Sixty-three percent were in the labor force. Among the 37 percent not in the labor force, nearly all were students at the time. Among those in the labor force, 82 percent were employed, and 69 percent of these had found a job within thirteen weeks of their graduation. These research findings suggest that most of the graduates obtained marketable skills from their postsecondary training and were employable upon completion of training. However, that 18 percent of alumni were unemployed up to eighteen months after graduation raises concerns. In comparison, 7 percent of similarly educated persons in the general labor force were unemployed (U.S. Bureau of Labor Statistics, April 1986).

Average earnings by alumni were $14,000. As shown in Figure 2, the average 1985 income for all working alumni was reported at $14,000, but differed largely by achieved degree level. There was also a wide variety in the earnings of alumni with similar degrees, indicating that factors such as one's gender, major field of training, type of job entered, and labor market sector (private/public) also influenced the amount of an individual's yearly income.

Males earn more than females. Although female respondents were better educated and entered higher status occupations than their male peers, they earned $3,760 or 23 percent a year less. Among the apparent reasons accounting for this serious discrepancy was that females were employed in a narrower range of jobs than were males and were much less likely to major in technical and scientific fields which led to higher paying jobs.

Most alumni were satisfied with their jobs. A substantial majority of working alumni expressed positive attitudes about most attributes of their jobs. However, fewer respondents were satisfied about their prospects for promotion, expectations of keeping their present job, and the match between their job and their field of training. These patterns repeat those consistently found in previous surveys of adults who are deaf and suggest some discontent with opportunities for career advancement.

VOCATIONAL REHABILITATION AND POSTSECONDARY EDUCATION

Extent of VR support. An estimated 68 percent of students with deafness in postsecondary education received financial assistance from vocational rehabilitation; nationwide, more than 600 rehabilitation counselors served these students. For the 1983-84 school year, forty-two of fifty-three VR agencies sponsored almost 4,000 students in postsecondary education. Vocational rehabilitation was the leading source of funding support for postsecondary training identified by a majority of students in the classes of 1984 and 1985. These conditions highlight the significant role that rehabilitation agencies perform in postsecondary training of students who are deaf.

Unequal distribution of programs. The forty-six postsecondary programs in this study were unevenly distributed around the nation into five regions with an abundance of programs and five other regions with a paucity of programs. This imbalanced array of programs created several problems, including where VR agencies sponsor students who are deaf for postsecondary training. Regions with the most postsecondary programs also had the most VR-sponsored students and most of these were trained in-state. Regions with the fewest postsecondary programs also had the fewest VR-sponsored stu-

dents and most of these students were trained out-of-state.

Factors in placing students. Cost factors, the availability of appropriate training programs, and the students' needs were the major conditions rehabilitation counselors reportedly considered when helping clients select their postsecondary programs. Although high costs inhibited sending students with deafness out of state for training, most VR agencies were willing to do so if necessary. It was encouraging to note that almost 70 percent of these agencies would support students for training at most any degree level.

Determining students' financial needs. In general, more than 80 percent of the agencies provided fiscal assistance only to students who demonstrated a financial need for it. However, there were wide variations among the VR agencies as to when financial eligibility was required to receive VR funding for different services such as interpreting, transportation, supplies, and equipment needed for postsecondary training.

Dollar limits on VR assistance. Despite rising costs for higher education, very few state VR agencies had a spending ceiling on postsecondary training for students with deafness. Most agencies, however, took into account financial aid students received from other sources, such as federal grants, scholarships, Social Security benefits, student earnings, and loans before determining the amount of fiscal assistance granted by the VR agency.

Coordinating financial assistance. The wide profusion of financial aid available for students in postsecondary training requires that the VR agency monitor this information so that total aid per student does not exceed actual training costs. The fifty-three VR agencies varied considerably in how they handled this coordination with the postsecondary programs, resulting in much inconsistency in the preparation of authorizations and handling situations when the client receives funding from other sources. Lack of uniform procedures may create confusion between the postsecondary programs and the VR agencies.

Communication between VR agencies and postsecondary programs. Much variation was noted in both the frequency and methods of contact between the fifty-three VR agencies and programs where they sponsored students. These inconsistencies in communication were compounded by a lack of uniform procedures among the fifty-three agencies for determining students' financial need, processing authorizations, and disbursing costs owed to the postsecondary programs. Similarly, in the survey of program coordinators, it was found that postsecondary programs differed widely in the subject matter communicated to the VR agencies.

Recommendations

The findings from these four interrelated research projects indicate that in many respects the forty-six programs in this study were successful. Their 3,300 staff provided support services to more than 5,000 students with deafness and offered a wide range of career training options. Their alumni were also faring well, as measured by the degree of their participation in the labor force, quality of their jobs, satisfaction with those jobs, and earnings. Their success appears to justify the funding invested in their education and reflects positively upon the postsecondary programs they attended. However, this study identified a number of trouble spots and several recommendations are made for consideration by professionals in postsecondary education and rehabilitation. The full report of this study contains numerous other findings and additional recommendations.[1]

1. **Postsecondary programs and state rehabilitation agencies should develop rigorous action strategies to identify, recruit, and retain black, Hispanic, and other racial/ethnic minority students who are deaf.**

Minority deaf students were found to be not only less likely to participate in postsecondary training than their white deaf peers but also disproportionately attending rehabilitation-technical rather than academic programs, resulting in most of them receiving vocational rather than academic degrees. Postsecondary program and rehabilitation agency staff need to intensify their contacts with nearby high schools to encourage more minority students who are deaf to enroll in postsecondary programs. Once enrolled, special support services should be provided to retain these students towards graduation. Effective practices need to be reported in the professional literature.

2. **Specialized postsecondary programs should identify exemplary practices in student retention, gather data from withdrawing students, and determine costs and benefits related to student retention.**

During a typical school year one out of every five degree aspirants who is deaf withdraws from college and this rate increases to two of every five over a longer time span. Quitting college has costly consequences: graduates from Gallaudet and NTID earn between $3,200 and $4,000 a year more on the average than do nongraduates (Rawlings, Karchmer, King, & Brown, 1985; Welsh & Walter, 1989) and both postsecondary programs and state rehabilitation agencies are finding attrition of students who are deaf to be a costly experience.

There is an apparent need for postsecondary programs to develop more focused and innovative approaches to this problem, as conventional methods in place do not seem to be enhancing retention of at-risk students. Such existing practices should be systematically evaluated and this knowledge shared between programs. Once coordinators are aware of effective techniques to counter attrition, they may

[1] Enhancing Opportunities in Postsecondary Education for Deaf Students is available for $10.00 from the Rehabilitation Research and Training Center on Deafness and Hearing Impairment, University of Arkansas, 4601 West Markham, Little Rock, AR 72205.

be more willing to invest program resources in this important area.

3. **The U. S. Department of Education needs to increase its investment in research and development of materials, methods, and technology to improve the instruction of postsecondary students who are deaf. The Department should, furthermore, fund a National Clearinghouse to evaluate, distribute, and implement effective technological, curricular, and related products.**

Among program graduates, 75 percent complete a two-year or equivalent degree compared to 25 percent of the general college population. Among the many factors contributing to these conditions is the low level of academic achievement among high school students who typically graduate with a third- or fourth-grade reading ability (Allen, 1986). Toward addressing these problems, exemplary instructional practices in postsecondary education need to be identified, evaluated, and disseminated through a mechanism such as a National Clearinghouse. The results from federally funded research projects could be channeled through such a Clearinghouse to bring applicable practices to the 150 special postsecondary programs.

4. **The fifty-three state and territorial vocational rehabilitation agencies and the 150 postsecondary programs should continue their efforts to improve communication and develop consistent policies and procedures which expedite the transition of students who are deaf into and through their postsecondary programs and subsequent employment upon graduation.**

There are evident difficulties inherent in efforts to properly coordinate communication between the various state VR agencies and postsecondary programs on the processing of financial aid information for students who are deaf. This need for better communication has been addressed by the Standing Committee on Services to Individuals with Hearing Impairments within the Council of State Coordinators of Vocational Rehabilitation which has (a) co-sponsored with NTID a training package for postsecondary educators and rehabilitation professionals, (b) approved a standard Financial Aid Form, and (c) co-signed with several larger programs cooperative agreements specifying information reporting requirements between the student, the program, and the VR agency. However, each VR agency should develop similar agreements with all special postsecondary programs in which their students are enrolled. Furthermore, special coordinated efforts between postsecondary and rehabilitation professionals are needed with two groups of graduates: (a) the 20 percent who aspire to earn higher degrees and (b) the 18 percent of alumni who were unemployed almost two years after graduation.

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Developing a Sense of Community

For Students with Disabilities at a *Tribally Controlled College*

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Introduction

Located on the Flathead Reservation in northwestern Montana, Salish Kootenai College (SKC) is a tribally controlled two-year college offering associates degrees in the liberal arts and technical fields. The college is one of twenty-four tribally controlled colleges in the United States (The Carnegie Foundation for the Advancement of Teaching, 1989). Two years ago, SKC realized that it was in a unique position to develop a program for students with disabilities that could serve as a model for other tribal colleges.

SKC had an accessible campus for students with disabilities and the college had developed a close working relationship with the Montana State Vocational Rehabilitation Services Division and the Confederated Salish and Kootenai Vocational Rehabilitation Services Project (a tribal rehabilitation service project serving American Indians

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on the Flathead Reservation). This combination of factors created a situation that allowed SKC to attract a number of students with a wide variety of disabilities to the campus. The number of students and the diversity of disabilities presented an opportunity to explore what elements would be necessary to develop successful programs for students with disabilities at tribal colleges.

At the beginning of the 1989-90 school year, with the assistance of a grant award from the Career Placement for Students with Disabilities in Post-Secondary Education Program, SKC initiated a project to demonstrate an effective model for serving students with disabilities. The role for a unique service delivery system is an outgrowth of the role played by the tribal colleges themselves. In Tribal Colleges: Shaping the Future of Native America, the critical role played by the tribal college is stated as "First, tribal colleges establish a learning environment that encourages participation by and builds self-confidence in students who have come to view failure as the norm." (Carnegie Foundation 1989, p. 3). It was clear from the beginning that the students applying to the program were lacking in self-confidence, and had histories of failure. In addition to these problems, students with disabilities had little knowledge of assistive devices or the network of services available to students with disabilities. It was this set of problems that would have to be overcome for these students to be successful in college.

The Students

The characteristics of the students who have applied for services over the past year and a half present a picture that reflects the problems described above. Debbie presents a profile of the type of student served by the project. In 1987, Debbie injured her back on the job. The accident left her out of work with only a meager short term workers' compensation payment. When she came to SKC in the fall of 1989, she was twenty-eight, a single parent with a six-year-old daughter to raise. She was a member of an Indian tribe from another part of the state. She had no friends or family in the local area. She was heavily medicated for pain and had no knowledge of assistive devices or agencies that serve persons with disabilities. Debbie had problems when she came to SKC. Sitting in the hard chairs in her classes caused pain in her back that was almost unbearable. Debbie was not well prepared for college academically, she had many problems outside the classroom, and she was newly disabled. Debbie's problems are representative of the type of problem presented by the fifty students served by the SKC project.

The Model

What type of service program would best serve this type of student and also reflect the nature of Indian culture? In tribal culture, the extended family or tribal community provides care and support for the person who is in need. That person, in turn, is expected to provide support to the tribal community and to the other family members when they are able. This is the concept on which the support services for disabilities was founded at SKC.

What features would a service delivery prototype offer in order to provide an extended family or community system for its participants? In American Indian cultures, the concept of ownership by the entire community needs to be recognized. The system needs to provide outreach services to the members of the community. The system needs to be straightforward and not encumbered by too many procedures. All the members of the community must work at understanding each other on a personal as well as professional level. These are the primary components of the delivery system developed by SKC. Many unique activities have been developed at SKC to help create the concept of community.

The first concept, the concept of ownership by the community, entails involving those students in the operation of the delivery system who are being served by that system. A few examples demonstrate how this concept has affected the SKC project. First, two students served by the project sit on the advisory board for the project. Also, student ideas have lead to the implementation of various activities such as project support groups and temporary on-campus parking permits for designated parking spots, while an application for a state permit is being processed. The most dramatic example, however, relates to the name of the project. The original name was SKC Support Services for Handicapped Students. This name offended the students who were being served. A series of name changes occurred, but finally it was input from students that lead to the present name which is SKC Access Services. The struggle to come to agreement on this issue was difficult. However, the struggle over the issue and the resolution of the problem was worked through. This process took about a year. There were strong feelings and disagreements, but the unit held together, continued discussions, and there was resolution.

The second important component of the model involves reaching out to individuals in the community rather than expecting the person in need to come for assistance. The primary example of this component at SKC is the retention system that has been developed for students participating in SKC Access. The core of the retention program is a system designed for the earliest possible identification of students who have problems in order to facilitate problem solving in advance of the student dropping out of school. Instructors in the program are contacted every two weeks in an effort to assess the progress or potential problem areas of each Access student. If there is an indication of problems, students are contacted directly. If they agree there is a problem then they are assisted in developing a problem solving plan.

Instructors are also encouraged to contact the Access office if they are aware that any of the project students are having difficulties. This system has led to more than 90 percent of the Access students completing each quarter that they have begun over the last four quarters. The key to the program is that when a student is contacted, it is done in a way that assures that student that he/she is being contacted out of concern and a willingness to help.

Another very important component of the program is openness and a freedom from too many procedures. SKC Access works closely with Vocational Rehabilitation in an effort to keep the evaluation process of clients to a minimum. Vocational Rehabilitation provides the evaluation and testing necessary to provide documentation for eligibility to the program. Then once a student is in the Access program most assessment is based on student self report, observation of students, and instructor reports. Another example related to openness is that the Access office staff observes an open-door policy. There are few appointments made and no secretaries or other obstacles to dissuade the student from meeting with program staff when he/she needs to do so. This type of openness is a campus-wide policy and is important to fostering a sense of community.

The next important element of the model is the development of an understanding of others based on personal rather than job-related factors. The faculty and staff are encouraged to feel part of the Access project. Three workshops were held to assist staff and faculty to get a sense of the many disability-related problems. Additionally, the three SKC staff who have severe disabilities served as role models for the staff enabling them to better understand the problems faced by people with disabilities.

However, the most effective approach proved to be the disability awareness day experience. This experience consisted of cooperating faculty and staff acquiring a disability for one day. Approximately 75 percent of faculty and staff participated.

These components have created a sense of equality and closeness that have made the program very successful on this campus.

The Results

You may wonder what happened to Debbie. She was loaned a special cushion from the project to sit on in class. She was referred to Vocational Rehabilitation, the local independent living center, and a pain clinic. She became involved with the project support group and will graduate this spring with an associate degree. She is the president of the SKC Student Council, treasurer of the National American Indian Higher Education Consortium, and recently was awarded a scholarship to attend a minority leaders fellowship program in Washington, D.C. Because of SKC Access, these students with disabilities are closer to their own definition of success than before coming to SKC. If nothing else, they all have a sense that there is a community of which they can be a part, until they find their place in the larger community.

Another beneficial result is that project Access students are establishing a sense of community of their own apart from the formal service delivery model. For example, the students independently formed an integrated recreation program for persons with disabilities that is operated by the students themselves. This recreation program has sponsored a wheelchair basketball game and is developing other activities to provide recreational opportunities for persons with disabilities at SKC and for the entire Flathead Reservation.

SKC Access is now in the process of assisting other tribal colleges to develop services for students with disabilities. Personal visits are being made to some campuses, telephone calls are made to others. Also, at the upcoming American Indian Higher Education Conference, the staff will meet with representatives of other tribally-controlled colleges in an effort to encourage the development of similar services for students with disabilities. SKC Access fosters a policy of direct contact with similar institutions in an effort to disseminate the information gathered from the successful model that is project Access.

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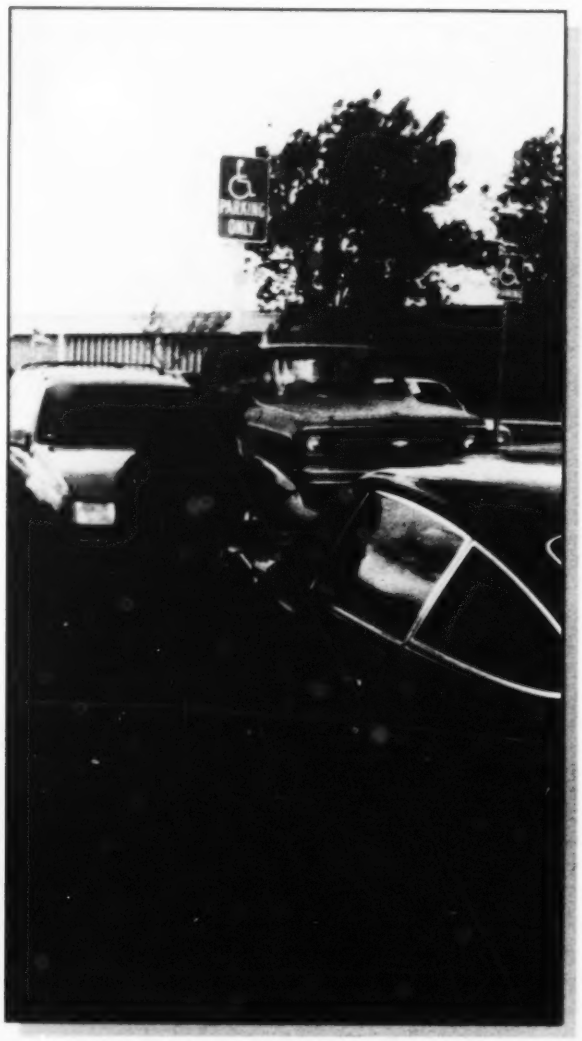
Project Employment

A Model for Change



Charles C. Wall, Ph.D.
Director
Project Employment

and

Holly Culhane
Co-Director
Project Employment

"Hire the Ability, Not the Disability" *is the motto that drives the work of* ***Project Employment****, a 1989 three-year grant from the U. S. Department of Education, Office of Special Education and Rehabilitative Services (OSERS), Office of Special Education Programs (OSEP). One of the major objectives of* ***Project Employment*** *is to build a working model relationship between a community college and its business environment to match the skills and abilities of students with disabilities with the needs of area employers.*

Education and Career Preparaton: Meeting at the Crossroads

An overriding hypothesis for this model-building effort is that while we in education are doing a fine job of providing a quality education for students with disabilities, these academic and vocational skills are not necessarily leading to gainful career-oriented employment. Often, educational programs are built upon the mandated academic subjects plus vocational programs for which faculty are qualified to teach but which may not represent needs of a given employment community. The end result for those with disabilities is an adequate education without career outcomes often leading to frustration and disgust with the educational system. For many, the ultimate result is a return to the protective environment of home and the security of family and friends.

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This all too frequent waste of human resources is one major concern of the Project Employment staff working within the structure of Bakersfield College, Bakersfield, California. Under the direction of Charles C. Wall, Ph.D., who is blind and himself a graduate of Bakersfield College, Project Employment is now in its second year of funding and is making considerable strides to bridge the gap between education and the world of work. Bakersfield College is a "mainstream" institution in which all our 550 students with disabilities attend regular classes with nondisabled students. Special programs are available to those with disabilities to provide additional assistance such as a high technology lab for instruction in use of adaptive computer equipment, learning skills classes, tutoring, counseling, and job placement. Disabilities range from learning disorders to job-related injuries, severe multiple sclerosis, acquired brain injury, hearing impairment, and blindness. Regardless of the student's disability, Bakersfield College enjoys a reputation for treating all with equal respect and actively promoting individual initiative and self-esteem. Bakersfield College provides an environment where dignity, self-respect, and recognition of personal achievement are part of our daily operations.

Project Employment: Defining Objectives

Project Employment has ten basic objectives.

1. To develop a working relationship between Bakersfield College and the business and industry segment of the Bakersfield College attendance area.

2. To identify positions on campus and at local businesses which would be piloted as demonstration job sites for students with disabilities from Bakersfield College.

3. To implement a permanent working relationship between business and the Supportive Services Center at Bakersfield College, and staff of the College and postsecondary schools.

4. To secure four job slots in area businesses and/or Bakersfield College.

5. To establish six additional job slots for students who are disabled and to continue the original four positions in area businesses and/or Bakersfield College.

6. To place Bakersfield College students with disabilities in permanent jobs with businesses in the Bakersfield community.

7. To expand the placement program to include pursuit of job opportunities utilizing data and experience of students who have successfully integrated themselves into the work force.

8. To establish a support system with employers who have given employ-

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ment to Bakersfield College students with disabilities.

9. To establish a supportive environment for placement of students on the Bakersfield College campus.

10. To disseminate results of the impact of the project to prospective Bakersfield area, state, and national sources.

Each of the above objectives has a specific time line, defined responsibility, methodology to achieve the objective, instrumentation and measurement techniques, and procedures for dissemination of project results. Now concluding our second year of work, we can look back upon numerous successes and some failures. Some of these were expected and some came as a complete surprise.

First Steps: Spreading the Message

Our initial effort to inform the business community about the vast pool of talent going untapped in our community resulted in a significant change in our approach. In October, 1989, we mailed approximately 600 formal invitations to businesses that were members of the Greater Bakersfield Chamber of Commerce and Board of Trade. The invitation encouraged these firms to send a representative to our "Summit" to discuss employing persons with disabilities.

Of the 600 invitations sent, forty firms responded positively. With the concern that invitations had not been received, telephone calls were placed to many of these firms. The shock came when many who had received their invitations made comments such as: "We're not interested in this sort of thing." "We don't want those kind of people working for us." and "We don't have jobs for handicapped people here." Suddenly, we realized individual student placements might be possible with only a few firms. However, our major concern was a community-wide attitude problem.

Since the Greater Bakersfield area includes approximately 350,000 persons, our original plan of meeting one-on-one with employers seemed unrealistic. With this realization in mind, we began working with KERO-TV23 to make four public service announcements highlighting the successes of local employers who had hired people with disabilities. These PSAs listed our telephone number and encouraged interested persons to call for additional information. To date, the four PSAs have been aired and with the cooperation of the other three television stations in our area, a thirty-second spot runs about eight times per day.

A local "rock" radio station geared to young adult listeners also assisted our efforts by airing a one-week series highlighting Project Employment. The Bakersfield Californian, a local newspaper with a daily circulation of 80,000, ran a full-page story profiling Project Employment. Five feature stories have now been aired on the local evening television news on two network stations. In addition, 1,000 brochures describing the project have been distributed and approximately fifty presentations have been made to community service organizations. This eighteen-month blitz has put us in the unusual position of having far more jobs available than we have qualified students. We also find employers calling and sincere dialogues developing between Project Employment staff and firms previously having no idea how those with disabilities might help meet their organizational objectives.

Community Advisory Council: Key to Success

Our community advisory council is a major contributing factor to our success. The group meets monthly and is chaired by a member of the council rather than a member of Project Employment. Each meeting is held in the office of a different council member where representatives of that firm are invited to participate in our discussions. Our original council of twelve members has now been expanded to twenty-four and includes organizations that collectively employ approximately 8,000 persons locally. Each host firm provides lunch or refreshments and has the opportunity to share its company activities and operations with those with disabilities as customers and employees. This involvement of community employers has given us considerable credibility and has encouraged other firms to listen to our request for their active participation.

Student/Employer Profiles and Expectations: The Highs and Lows of "Matching"

While employers have been targeted for attitudinal adjustments, they are by no means the sole reason for the high unemployment rate among those with disabilities. It has been found that students with disabilities have contributed to their own unemployment to a greater extent than anticipated. When 382 students were asked to complete a survey of their own career interests and job experience, only 134 surveys or 35 percent were completed and returned. While this percent may be sufficient for research purposes, it is low when considering we are here to help these students find employment in career-oriented positions. In addition, only 70 percent of respondents saw a career for themselves after completing their education. The data indicates that computer-related careers are the first choice of these students, followed closely by careers in teaching and counseling. Students responding to our survey represent a broad cross section of disabilities, including physical, sensory, learning-related, and psychological. There does not seem to be one area of disability that has more significant representation than another.

Matching student skills with employer needs and determining to what extent student educational programs will result in future employment have been second-year program concerns. A letter was sent to all students with disabilities requesting that they make an appointment with the Project Employment office to interview with an area employer to determine the student's career interest and career preparation. From these interviews, we then developed a list of candidates to recommend to area employers. We have strong feelings that this personal interview sequence must be part of any successful model. The information gained through the personal interview increased the potential of a successful match between employer needs and student. Building self-confidence and presenting themselves in a positive manner will improve students' job interviewing techniques.

In an effort to determine labor trends in our community, Project Employment staff instituted an annual seminar entitled "Greater Bakersfield: Our Next Five Years." This seminar, held at the Bakersfield Convention Center, was sponsored by the Chamber of Commerce and had approximately 85 participants attending to hear a panel of experts discuss job trends, business growth, and environmental issues. A comprehensive document, including that information and a summary of Kern County labor trends, is now being revised in preparation for next September's seminar and will be used to analyze student programs with business trends in the area.

Project Partnerships: Executive Exchange Opportunities

One method we have found to be extremely successful in bringing business and education together to assist those with disabilities is through the development of a staff position called Project Co-Director for Business. During the first year of our project, the co-director was on loan to us in an executive exchange program. The cooperating local employer was Pacific Gas and Electric Company. As a result, Project Employment gained immediate community credibility and the ongoing support of a major employer in our area.

Expanding the Partnership: Overcoming Hurdles

One primary objective is to develop a model for a working relationship between a community college and its business environment that does not require an operation similar to Project Employment. In other words, we are attempting to eliminate the need for our existence without losing the purpose of our program. To do this we have

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been working with two departments at Bakersfield College that include the Supportive Services Office and the Placement Office. Interfacing with these offices has been moderately successful but lacks the close working relationship necessary to sustain our efforts when the grant is completed.

Enhancing Community Visibility and Participation: Some Realities

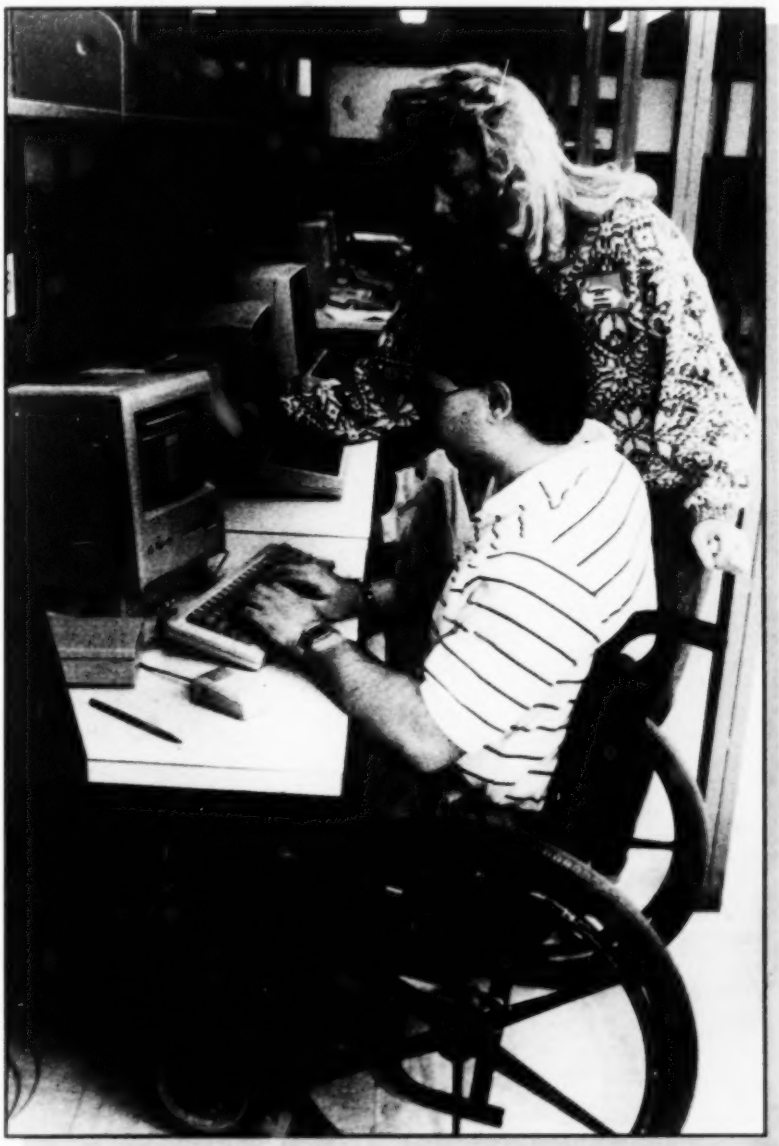
Another area of concern is in the use of the advisory council to develop community acceptance. The council is a key link in our community credibility and access. A successful, transportable model will require a strong advisory council working with college personnel.

Dollars and Cents: Students' Sense

Perhaps the most frustrating area is the general lack of preparation of our students to accept employment. The problem is much deeper than inadequate employment skills. Moreover, students seem to resent employers who are not willing to accept them with their disabilities regardless of their skills levels. Many students maintain the mistaken belief that they should begin in a mid-level management position with high pay even though they have few skills to offer an employer. Another unfortunate reality involves those students who refuse work unless they can make more money than they are currently receiving through Social Security. As a result, many students are unwilling to accept entry level positions without high wages. These problems go beyond our immediate ability to resolve and continue to haunt our efforts to place students in meaningful positions. Clearly, we need to continue to address these issues and problems. However, they are not deterring our efforts to meet employment needs with qualified students.

Future Efforts: The Forcast

The third year of our grant funding will be devoted to developing conclusions, preparing a manual describing our model, preparing journal articles, and making personal presentations at meetings and conferences with educators and business people. We enjoy a good working relationship with print and electronic media representatives and will use these contacts to disseminate our results as widely as possible. One national television network has offered to assist us in the final dissemination of the project results through its 250 affiliates around the country. Such cooperation leads us to believe that our efforts to bring those with disabilities into the mainstream of employment are successful and truly make a difference.



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HEATH Resource Center

National Clearinghouse on Postsecondary Education for Individuals with Disabilities

Rhona C. Hartman
Director
HEATH

A high school counselor from New York, a parent from Ohio, and a twenty-two-year-old student with a learning disability from Kansas, each wrote to the HEATH Resource Center to find out what financial aid is available to attend college for students with disabilities.

Very little scholarship money is available specifically because of disability. HEATH mails to such inquirers the resource papers called ***Financial Aid for Students with Disabilities and Vocational Rehabilitation Services — a Postsecondary Student Consumer Guide*** that provide current information.

A disability support service coordinator from a small independent college in Pennsylvania asked if they can charge a fee above tuition for certain program services for students with learning disabilities.

HEATH staff discusses the fact that by law (Section 504 of the Rehabilitation Act of 1973) colleges must provide, at no additional cost to the students, access to campus programs (such as additional time for testing or completing coursework, use of auxiliary aids such as notetakers, interpreters, tape recorders, or other services which are provided to all students, such as peer tutors.) A number of campuses do charge an additional fee above regular college tuition for support services above and beyond access, such as those for personal use and study (diagnostic testing, regular sessions with learning disability specialists for tutoring, academic and personal counseling, support groups or a separate course designed for the specific disability).

A university Vice President for Planning, a syndicated journalist, and an Oregon grant writer each called to find statistics about college students with disabilities: How many are there? Are there increasing numbers? What are graduation rates? Which disabilities are represented?

The most recent information from the National Center for Education Statistics indicates that 10.5 percent of the nation's students at all levels of postsecondary education report having at least one disability. These 1.3 million students report that they are blind or visually impaired, deaf or hearing impaired, have health or orthopedic disabilities, or a specific learning disability, in that order of prevalence. Data from the ***American Freshman, National Norms*** indicates that, between 1978 and 1988, the percent of freshmen reporting a disability has nearly doubled. There is no national data about retention or graduation rates. HEATH staff sends to such inquirers ***Facts You Can Use*** reprinted from ***Information from HEATH***.

A vocational rehabilitation counselor in Illinois and the brother of a spinal cord injured high school senior in Arizona each called to find out if there are any colleges that provide the support necessary for a severely disabled student.

Yes, in general, a university that has a medical or nursing school or rehabilitation services training program probably also has a supply of students willing to be employed by the student as a personal service aide. A Center for Independent Living may be near enough to a campus to provide a pool of attendants. HEATH staff also discusses specific campus suggestions based on personal information the inquirers provide and then sends several reprints from the clearinghouse newsletter, ***Information from HEATH*** about students with severe disabilities on campus. Staff recommend the book ***Colleges that Enable***, by Prudence and Jason Tweed (1989) Park Avenue Press.

A caller from Maine seeks information for her seventeen-year-old grandson, who has a substantial learning disability. A typical college is not right for him just now.

There are a number of post high school possibilities — community colleges, vocational technical schools, career schools, and several training programs designed specifically for people like her grandson. HEATH's paper, ***Young Adults with Learning Disabilities and Other Special Needs, A Guide To Transition Programs*** and newsletter article reprint, ***After High School, What's Next*** will both be sent following the telephone conversation.

Librarians, writers, governmental officials, state and local educators as well as students writing term papers or graduate theses, and people newly disabled are all among those who call or write to HEATH for specific answers to questions about education after high school for people with disabilities.

Background

HEATH Resource Center, the national clearinghouse on postsecondary education for individuals with disabilities, has been responding to questions like the ones above for more then a dozen years. HEATH is a program of the American Council on Education, the major representative organization in higher education in the United States. Since 1984 HEATH has been funded by the U.S. Department of Education, Office of Special Education and Rehabilitative Services (OSERS) under Part D of the Individuals With Disabilities Education Act (IDEA), formerly the Education of the Handicapped Act.

Beginning in 1977, as the regulations implementing Section 504 of the Rehabilitation Act of 1973 became effective, the American Council on Education created the HEATH Project (Higher Education and the Handicapped) with a combination of private foundation funds and technical assistance money from the Office for Civil Rights of the then U.S. Department of Health, Education, and Welfare. The early HEATH Project was designed to assist colleges and universities to understand the new civil rights 504 regulations and respond positively to them in the least expensive manner possible. Congress has never appropriated funds to implement Section 504. Colleges and universities learned what they had to do from a series of HEATH publications and workshops and began to make higher education accessible to people with disabilities.

After the initial phase of the HEATH Project concluded, the American Council on Education established a forerunner of the current HEATH Resource Center as a model program with funds from the Individuals With Disabilities Education Act, Part C. Between 1980 and 1983, HEATH staff and a broad-based advisory board developed systems to collect and disseminate information. During that time the Campus Resource File was established to collect reports from the field about effective strategies, policies, procedures, publications, and key people in American higher education. Regular interaction was established between HEATH and federally sponsored databases such as the Educational Resources Information Center (ERIC) system and the National Rehabilitation Information Center (NARIC), as well as with other federally funded education clearinghouses and regional resource and training centers. The model for staffing the clearinghouse was developed at that time. The model features a small professional staff (three to four people) who divide responsibility for and take the necessary steps to accumulate information leading to resource papers and articles. Such steps include meeting key leaders, following the literature of specified organizations, participating in conferences, and using existing channels of communication to disseminate HEATH materials.

The IDEA Amendments of 1983 (P.L. 98-199) stipulated that, in addition to the already established National Clearinghouse on Education for Handicapped Children and Youth, there be a national clearinghouse on postsecondary education of individuals with disabilities "to collect and disseminate information on a national basis to handicapped individuals, professionals, and other interested individuals concerning postsecondary services and programs for the handicapped, including specially designed programs of postsecondary, vocational, technical, and adult education for handicapped individuals." (IDEA, Part D, Section 633.)

The American Council on Education, in 1984, competed successfully to operate that clearinghouse as the HEATH Resource Center. As an IDEA clearinghouse, the focus broadened to include education after high school in any type of institution from disability-specific training programs to graduate and professional schools. In addition, the types of disabilities to be addressed by the clearinghouse has broadened to include any disability.

Clearinghouse Activities

The main activities of the clearinghouse are to:

- collect information from a variety of sources about postsecondary education for individuals with disabilities,
- identify areas of need for additional information,
- develop new materials and resources to meet those needs,
- disseminate information through national, regional, state, and local organizations,
- respond to inquiries from the public.

To carry out these activities effectively, HEATH depends on guidance from an advisory board, which meets annually, and expertise of individuals on a non-meeting resource panel. These target group representatives are selected from various sectors of the disability and postsecondary education fields. Examples of these target groups are:

- youth and adults with disabilities,
- families of secondary and postsecondary students with disabilities,
- counselors in educational and rehabilitation settings,
- instructors in high schools and colleges,
- providers/coordinators of disability support services in campus and community institutions,
- administrators or officials of national, federal, regional, state, and local education and rehabilitation

institutions, associations, and organizations

Identification of Information Needs

Over the last five to six years HEATH staff and advisory board have identified the following as areas of information needs:

Learning Disabilities: Post-high school options, college selection, provision of services by colleges, diagnosis, and services for adults;

Technology: adaptive devices that are developed to assist people with specific disabilities, creative use of technologies for other purposes, specialized electronic equipment and "low tech" options to assist students in postsecondary and training programs;

Hidden Disabilities: chronic illness (including psychiatric disability), head injury, low vision, and partial hearing; and

Data: statistics about students with disabilities such as prevalence in postsecondary education, participation, retention and graduation, and career entry.

Identification and Dissemination

In order to meet the informational needs of inquirers as well as to disseminate information proactively, HEATH has a vigorous publications program. ***Information from HEATH*** is the clearinghouse newsletter which is currently issued three times a year. It covers emerging issues, describes current campus highlights, discusses relevant new legislation or court rulings, reviews selected new materials produced by others on topics of concern, and announces new HEATH publications. ***Information from HEATH*** is sent to nearly 18,000 subscribers from every state and many other countries. Subscriptions are free and subscribers represent all of the target groups listed above.

Topical publications, such as resource papers, specialized pamphlets, monographs, and directories are prepared or updated by HEATH staff on a regular basis. A single copy of each HEATH publication is available free to those who request it. Most HEATH publications are available on audiocassette or computer disk for people unable to read standard print.

During the last three years HEATH has disseminated over 50,000 resource papers and approximately 20,000 ***HEATH Resource Directories.*** In addition, more than 160,000 newsletters have been sent to subscribers and more than 100,000 copies of ***How to Choose a College*** have been distributed.

Response To Inquiries

The most visible and most satisfying activity of the HEATH Resource Center is, and has always been, the direct contact with people via telephone and mail. Between 1984 and 1985, the Center handled about 4200 inquiries, most of which arrived by mail. In the fall of 1985 the Center introduced a toll-free telephone service. By 1990 the Center responded to more than 14,000 inquiries a year, more than half of which were by telephone! Additionally, the American Council on Education has provided HEATH with TDD capability since 1978.

Anyone wanting more information about HEATH may call (800) 544-3284 or (202) 939-9320 (both voice or TDD) and request to be on the HEATH subscription list. Scholars planning to be in Washington, D.C. are welcome to use the HEATH library's extensive collection of directories, periodicals, monographs, books, articles, and videotapes. Letters to HEATH can be sent to:

HEATH
One Dupont Circle
Suite 800
Washington, D.C.
20036

SPECIAL FEATURE

ASSISTING YOUNG ADULTS WITH SEVERE TBI

TO GET AND KEEP EMPLOYMENT THROUGH . . .

A SUPPORTED WORK APPROACH

Tyler is a twenty-two-year-old single male who sustained a grade III injury at age eight when he was hit by an automobile while attempting to cross the street. He was in coma for five months and hospitalized for one year. Aside from a fused elbow, which limits his range of motion, Tyler has no significant physical impairments. Cognitively, he has deficits in sustained attention, written arithmetic calculations, auditory memory, hypothesis testing and visual memory. Cognitive strengths include language ability and both written and oral communication skills. Reportedly, Tyler had been hospitalized in the recent past for depression and a suicide attempt.

Prior to referral to supported employment services, Tyler held numerous part-time jobs, but, was unable to hold few for longer than three months. He desired a job in retail because he wanted to have frequent opportunities to interact with the public. His first supported employment position was a part-time job at a local drug store. Within two months Tyler's hours were cut to less than ten a week. He was eventually laid off. He experienced considerable problems with distractibility and inappropriateness with customers, particularly women. Immediately following the lay off, job development resumed for Tyler. This time, program staff encouraged him to focus on jobs that involved less customer contact, but he was insistent that he wanted another position in retail. A part-time sales associate position at a children's clothing store was located where the same social problems recurred. A behavioral modification program was implemented to alleviate the behaviors, but after being employed for four months, Tyler resigned from his position due to the threat of termination.

After the second placement, Tyler did not want to work with the supported employment program. He found three other jobs on his own, none lasting longer than a few months. Eventually, Tyler decided to return to the program. A full-time groundsperson position was found at a local apartment complex. The starting salary was $6.00 per hour with a benefit package that included medical and life insurance, paid sick and vacation time after six months, and a wellness program. Tyler was considered for the job because the position would require limited contact with residents and other employees, hence, avoiding further social problems. He agreed to accept the position primarily due to the salary and benefits package.

The groundsman position consisted of three major duties: (a) policing the grounds for trash and debris, (b) cleaning the swimming pool, and (c) cleaning the porches and breezeways within each apartment building. The groundsman was also required to do special projects assigned to him by the supervisor each day, such as distributing flyers to residents and changing light bulbs.

After six months on the job, only one inappropriate interaction had occurred. Tyler knocked on a female resident's apartment door and asked her name. A contract was drawn up with Tyler in which he agreed not to knock on any resident's door and to limit his conversation times with residents. Tyler is receiving satisfactory evaluations from the apartment management.

Michael West, M.Ed., Research Associate
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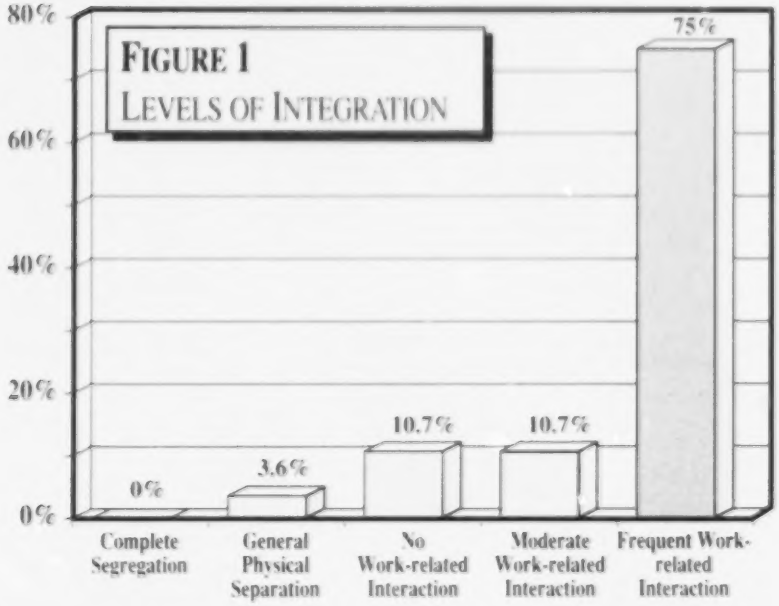
Virginia Commonwealth University

Traumatic brain injury (TBI) has become recognized as a problem of major proportions. Annually, approximately 400,000 to 500,000 individuals sustain a brain injury of sufficient degree to require treatment, approximately 165,000 of them children (Frankowski, 1986; Savage, 1987). Anywhere from 44,000 to 90,000 persons will have severe, chronic, debilitating impairments from TBI, including 16,000 to 20,000 children (Savage, 1987; Traphajan, 1988). While any degree of injury will typically produce some physiological or neurological changes, survivors of severe TBI will exhibit cognitive, physical, and psychosocial impairments that adversely affect future employability and participation in other activities of daily living (Vogenthaler, 1987). Because the majority of persons who sustain TBI are teenagers and young adults, more often males, who are either just beginning or yet to begin their careers (Frankowski, 1986; Rimel & Jane, 1984), and because of improved life-saving and life-sustaining technology, severe TBI will frequently result in long-term dependence and economic hardship on survivors and their families (McMordie & Barker, 1988).

TABLE 1
TYPES OF POSITIONS HELD BY STUDY GROUP

POSITION TYPE	FREQUENCY	PERCENT
Clerical/Office work	7	25.0
Stock clerk/warehouse	6	21.4
Janitorial/custodial	5	17.9
Groundskeeping	4	14.3
Food service	2	7.1
Transportation	2	7.1
Benchwork/assembly	1	3.6
Laundry	1	3.6

A major portion of the financial burden to victims, their families, and society can be directly linked to poor rates of employment among survivors of severe TBI. Follow-up surveys have found that these individuals are unlikely to enter or reenter the work force (Ben-Yishay, Silver, Piasetsky, & Rattok, J., 1987; Brooks et al., 1987; Stapleton, 1986). Many who do return to work will do so in less demanding positions, with fewer hours, at less pay, or in sheltered work (McMordie, Barker, & Paolo, 1990; Peck et al., 1984).



The federal-state vocational rehabilitation (VR) service system is the primary means by which persons with TBI access rehabilitative services (Veldheer, 1990). While the VR system has generally been effective for persons with mild injuries, persons with severe TBI will have greater difficulty accessing and benefiting from VR services, due to the following reasons:

1. The enduring concept of VR services is that they are time-limited and vocational in nature (Whitehead & Marrone, 1986). Persons with severe TBI have more complex, varied, and multifaceted deficits and needs that require long-term service obligations (Fraser, 1988).

2. The traditional service flow (i.e., evaluation, work adjustment, etc.) presupposes that clients can remember and build upon their experiences during service phases and generalize their training to actual work environments, abilities frequently impaired by severe head injury (Fawber & Wachter, 1987).

3. The time-limited nature of VR services makes it difficult to address episodic psychosocial impairments which frequently accompany severe TBI and which may not be evidenced until months or years

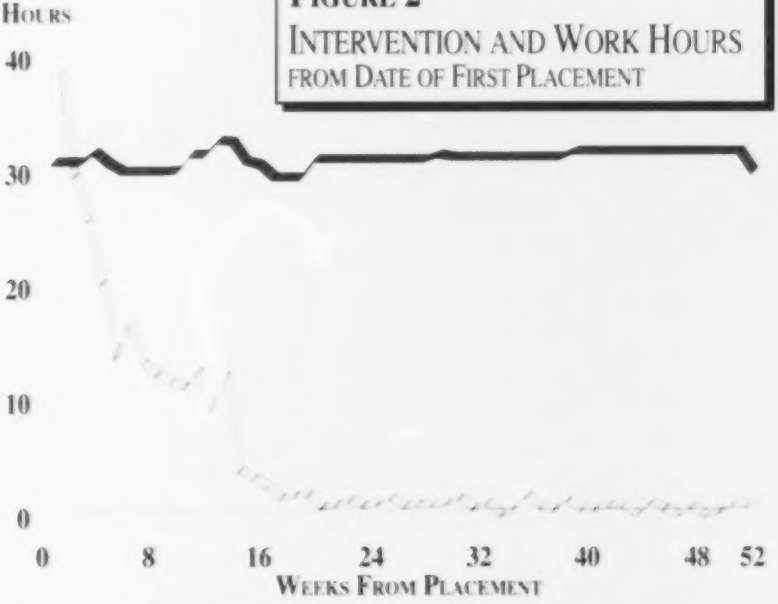
following the injury (Kreutzer & Morton, 1988).

4. Finally, rehabilitation counselors are often reluctant to offer services to individuals with severe brain injuries because of a historical pessimism regarding their rehabilitation potential (Price, 1986).

In many ways, post-acute rehabilitative services for adolescents and young adults will be different in focus and more problematic than those for adults (see Cockrell, Chase, & Cobb, 1990; Lehr & Savage, 1990; Savage, 1987). For example, the injury may interrupt the brain's development of abstract, complex functions. Social development may also be arrested if the injury occurs prior to or during adolescence. Survivors are frequently expected to return to a learning environment which is unprepared for their needs, and in which they cannot function. There may be resistance to transferring from regular to special education classes or to changing postsecondary or career plans. Survivors may be ineligible for specialized services, public and private, due to their age. And finally, vocational education programs and school to work transitional services may be unavailable or inappropriate for them.

In recent years, supported employment, first conceptualized for individuals with mental retardation and other developmental disabilities, has been utilized with persons severely disabled from TBI. Supported employment became a VR service option by way of the 1986 Amendments to the Rehabilitation Act (*Federal Register*, August 14, 1987). In those amendments, supported employment is defined as "paid work in a variety of settings, particularly regular work sites, especially designed for handicapped individuals: (1) for whom competitive employment has not traditionally occurred, and (2) who, because of their disability, need intensive ongoing support to perform in a work setting" (p. 30550). This commitment to both time-limited training and long-term support services distinguishes supported employment from traditional vocational placement models.

FIGURE 2
INTERVENTION AND WORK HOURS FROM DATE OF FIRST PLACEMENT



To illustrate the potential of supported employment to address the chronic unemployment of persons with severe TBI, this report will describe employment outcomes for a sample of young adults who sustained severe brain injuries during developmental years, and who received supported employment services from the program operated by the Medical College of Virginia at Virginia Commonwealth University. Research and public policy issues for improving employment services for this population will also be discussed.

Description of Individuals Participating in the Program

Each of the seventeen individuals in the study group had sustained a severe brain injury, determined either by duration of coma or of post-traumatic amnesia, prior to age twenty-three, and had been referred for supported employment services prior to age twenty-six. The project does not pre-screen prospective clients based on the extent of physical, cognitive, or psychosocial problems. Individuals with active substance abuse or acute medical problems are typically not placed into jobs until the problems are resolved. The group as a whole was very dependent on government income support (SSI and SSDI), and thirteen (76.5 percent) resided with their parents. Three (17.6 percent) were residents of supervised apartments, and one individual lived independently. Post-injury employment histories revealed that clients either (a) had not been employed following their injury, or, (b) had been employed in a number of positions but were unable to maintain employment for any substantial length of time.

Participants' Supported Employment Outcomes

Each of the seventeen members of the study group were placed into at least one supported employment position, with ten placed into a second position following job separation and one placed in a third position, for a total of twenty-eight placements. Clients averaged $4.43 per hour (ranging from $3.35 to $6.50) for thirty-one hours of work per week (range fifteen to forty). The posi-

tions have averaged twenty-nine weeks in duration, ranging from three weeks to 106. Each position has resulted in average gross earnings of $4,102, ranging from $270 to $18,579. Fringe benefits were included with 64.3 percent of the jobs, with the most frequently available benefits being paid vacation (46.4 percent of placements), medical insurance (42.9 percent), and employee discounts (32.1 percent).

Table 1 indicates the types of positions into which individuals were placed, and Figure 1 shows levels of work-related integration. The jobs were generally entry-level, unskilled, or semi-skilled positions, and were representative of jobs held prior to supported employment services. Three-fourths of the positions had frequent levels of interactions with coworkers or customers.

Figure 2 shows the mean number of work hours and hours of staff intervention from the date of first placement for the seventeen members of the study group. Intervention time is typically greater than work hours during the initial phases of employment, as staff work with the client to learn job tasks, arrange transportation, enhance social and peripheral skills (i.e., grooming), plan finances, and provide or make referrals for other supports. While work hours remain fairly constant, the amount of intervention needed to maintain employment steadily decreases over time, leveling off at between one and two hours per week. On an individual basis, clients have required up to four-point-three hours of intervention in a single week following job stabilization, as crisis periods arise at work or home which threaten job retention. The mean hours of intervention over the course of the first year was 269.4, with a median number of hours of 209.1.

Figure 3 and Table 2 show, respectively, type and primary causes for the eighteen separations attributed to the seventeen clients. Almost half (44.4 percent) of job separations were terminations, with the remainder about evenly split between resignations and layoffs. Poor social skills and medical problems accounted for the most separations (three each), but an array of reasons for separation were given. Almost without exception, second placements were much more successful than first placements.

TABLE 2
PRIMARY REASONS FOR JOB SEPARATIONS

REASON	FREQUENCY	PERCENT
Poor Social Skills	3	16.7
Medical Problems	3	16.7
Economic Situation	2	11.1
Insubordination	2	11.1
Moved Away	1	5.6
Does Not Want to Work	1	5.6
Poor Attendance	1	5.6
Aberrant Behavior	1	5.6
Interference with Aide	1	5.6
Poor Job Match	1	5.6
Needed Continual Prompting	1	5.6
Other Reasons	1	5.6

DISCUSSION

Youth and young adults who sustain severe TBI can be effectively assisted to enter competitive employment through a program of supported employment. Numerous production and social problems have surfaced throughout the study group's employment which have resulted in voluntary or involuntary job separation, or which would have resulted in job loss had supported employment staff not been available to intervene. Although regular separation is fairly predictable for this group, commitments to integrated employment and long-term support have not been abandoned, and subsequent placements were made. It is possible that the need for vocational support will continue indefinitely for members of this group and will be necessary in order for them to remain in the labor force.

Clients with severe TBI can test the resource limitations and fortitude of agencies which provide and fund supported employment. Their impairments with memory and reasoning may not be responsive to retraining. Their social and behavioral problems may be episodic and unpredictable, and incidents that occur away from the work environment intrude heavily on job functioning. For these and other reasons, they may be at constant risk for job separation. While adolescents and young adults with severe TBI generally have more and greater problems than typical supported employment clients, it is for persons with this level of need that supported employment was first conceived and developed, and for whom ongoing vocational support will have the greatest impact. While job retention for this group compares unfavorably with persons who have mental retardation and other developmental disabilities, their employability has been improved immeasurably over their prior status. Bringing more of these individuals into the work force will require fundamental changes in attitudes and practices related to employment services for this and other high-risk groups, particularly in regard to the inevitability of job separation. The commitment to long-term vocational support should not end with

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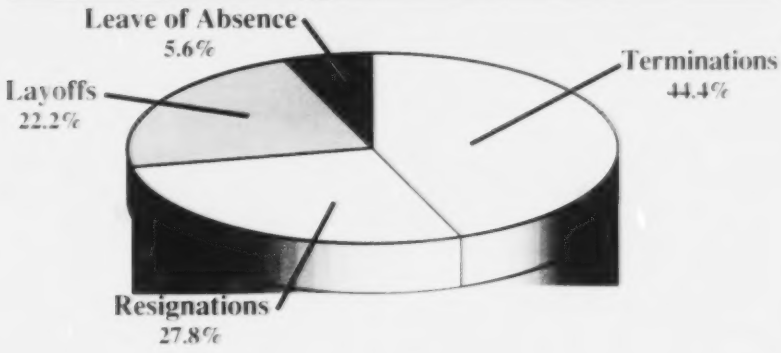
FIGURE 3
TYPES OF JOB SEPARATIONS FOR THE STUDY GROUP



the first job, or even the second or third. Each job placement increases the individual's capacity to function in the competitive work force, and brings greater understanding of his or her vocational interests and abilities.

Even a decade ago, there were scant employment or other support services for adolescents and young adults with severe TBI because there were so few survivors and the chances for recovery of those who did survive were remote. Medical technology has increased the likelihood that people who sustain severe TBI will survive and achieve normal life expectancy. Today, these survivors and their families desire, not just an existence, but a life of quality, including meaningful, productive employment.

Vocational rehabilitation services for this population cannot operate effectively in isolation from educational, medical, psychological, and community support services. Yet in most states, integrated, community-based services are still in the infancy stage for youth and young adults with severe TBI, and only a few states have developed approaches to address the long-term comprehensive rehabilitation needs of this population. The majority of programs continue to focus on acute medical care and acute rehabilitation (National Head Injury Foundation, 1988). Specialized post-acute vocational, neurobehavioral, and independent living services are limited in number and highly restrictive; demand for services far exceeds availability, and may be limited to adults. These services also tend to be very expensive and, therefore, are beyond the means of most head injury survivors and their families, and beyond the financial capacity of most public and private funding sources.

There are a number of steps that state and federal agencies can take to spur development of comprehensive, community-based services:

1. First and foremost, state and federal funding agencies should commit their mutual resources toward developing a comprehensive, coordinated system of services for adolescents and young adults with severe brain injury, from the acute medical stage, through acute rehabilitation, to long-term support services, across educational and adult services. Funding dollars should be earmarked specifically for programs to meet the unique needs of this population, and should include secondary education, transition to work or postsecondary education, supported and independent living, respite care and other family supports, behavioral and crisis intervention, counseling, case management, social/recreational development, as well as extended employment services.

2. Research and demonstration grants should be expanded in number and scope to develop a firm knowledge base of models, methods, and outcomes for improving vocational rehabilitation services to this client population. We need a better understanding of why many members of this population fail to achieve long-term retention, even within a program of ongoing support. Lastly, there is precious little information on the costs and benefits of various return-to-work strategies for comparison purposes; likewise, there is limited information on the costs of not providing vocational services, including costs for alternative day support services, permanent income maintenance, and the loss of contributions to the tax base from both the person with the injury and family members who must forego or limit their own earnings to provide daily care for their injured loved one.

3. Vocational rehabilitation counselor training programs should include a clear and unbiased picture of the needs and abilities of adolescents and young adults with severe TBI. State programs should encourage the investment of case service dollars for employment services, as well as for other acute and post-acute services which might promote future independence and competitive employment, such as physical therapy, occupational therapy, postsecondary education, personal assistant services, communication therapy, cognitive rehabilitation, supervised housing and independent living, and personal and family counseling.

4. Finally, efforts must be initiated to make public and private programs

more accessible and within the financial means of more adolescents and young adults with severe TBI and their families. This could entail developing outreach programs, improving access to VR services, and subsidizing private post-acute rehabilitative services for youth and adolescents with severe TBI.

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